Case Report

Postherpetic Neuralgia Presenting as Delusional Parasitosis: A Case Series

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ABSTRACT

Delusional parasitosis (DP) or Ekbom's disease is a rare psychiatric condition where the sufferers have a firm-fixed belief of insects crawling over their skin. The condition may be primary monosymptomatic hypochrondrical delusion or secondary to an underlying psychiatric or organic condition. We present two cases of elderly men presenting with classical symptomatology of DP, which is found to be secondary to postherpetic neuralgia following an acute episode of shingles or herpes zoster infection. One patient responded to a combination of antipsychotic, olanzapine, and pregabalin, used for neuropathic pain, and the other patient responded completely with medications used for neuropathic pain only without any antipsychotic use.

Key words: *Delusional parasitosis, Ekbom's syndrome, postherpetic neuralgia*

INTRODUCTION

Delusional parasitosis (DP) or Ekbom's syndrome is a monosymptomatic hypochondriacal psychosis where the sufferer has a firm-fixed belief of infestation of skin by insects or other parasites.[1] This primary complaint is usually accompanied by an abnormal sensation of these organisms crawling and biting parts of the body, usually the skin. Formication is a medical term used for the description of a sensation that resembles that of small insects crawling on (or under) the skin. These sensations classified as under paresthesias also include the more common prickling, tingling, or sensation of "pins and needles." The formication combined with underlying psychiatric or psycho-pharmacological issues can precipitate DP. It may be primary,[2] consisting of a monosymptomatic hypochondriacal delusion or secondary to an underlying psychiatric condition such as depression or schizophrenia. Organic DP may be seen secondary to organic conditions such as hypothyroidism, Vitamin B12 deficiency, diabetes, cerebrovascular disease, cocaine intoxication, HIV, allergies, and menopausal state.[3]

DP is a rare disorder, and a population-based study by Bailey *et al*. found DP to be in fact a rare disorder with incidence to be 1.9/100,000 person-years.[4] One study

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by Pearson *et al*. in the North Californian population estimated it to be 3.65/10,000 respondents.[5] There are no recent studies in India although a study by Srinivasan *et al*. (1993)[6] found the prevalence to be 19 out of 4200 patients. The incidence of DP increased with age, especially after the age of 40 years.[4] After the age of 50 years, it also affects women 2.5 times more than men.[7] Although there is no formally established classification of DP, it is coded in classification systems under persistent delusional disorders. Patients with DP are extremely convinced that their suffering is only because of insects and are reluctant to consider any other possibility.[8] Firmness with which patients stick with the assertion of infestation is noteworthy. Common comment includes "I can see the bugs, so its not my imagination." It is usually annoying to them that no one else can see the bugs except them, but that does not decrease their certainty.[9] Frequently, they present to dermatologists, collect skin debris, and present it as evidence, commonly called the "matchbox sign" or "baggie sign."[10]

The following cases presented with DP after the herpes zoster (HZ) eruptions appeared on the skin which acted as precipitant for the development of DP.

Postherpetic neuralgia (PHN) is a common complication of HZ which is a transient disease caused by reactivation of latent varicella zoster virus in the cranial or spinal ganglia. It initially presents characteristically with a painful rash in the affected dermatome and subsides in a few days. The neuralgic symptoms occur in 10%–34% of the affected patients[11,12] and are usually characterized by pain or associated sensory perturbations (e.g., numbness, itching, and paresthesias).[13]

Here, we describe two cases presenting with delusions of parasitosis triggered by PHN.

CASE REPORTS

Case 1

Mr. A, a 72-year-old man, is the 2nd admission with fixed belief that insects are crawling over his face and spreading all over his body. He presented with comorbid anxiety and depressive symptoms. Mr. A had previously been assessed and treated on the lines of DP and remained on treatment with selective serotonin reuptake inhibitor, pimozide and benzodiazepine, combination for over 2 years with only partial improvement in symptoms of anxiety and insomnia but not DP. On admission, several scratches and excoriating lesions were seen on the affected side of face, but the general, physical, and systemic examinations were within normal limits. Detailed blood investigations for any other secondary causes were all normal.

History suggested that the illness began with pustular eruptions around the left eye and cheek and a diagnosis of HZ which was treated with acyclovir. The symptomatology of insects crawling under the skin began about 1 month after the acute herpetic lesions healed when the patient started complaining of insects crawling under his skin, which he attempted to remove, but was unsuccessful. The patient believed that these insects were very poisonous and were spreading their venom all over his body. He believed that the insects initially intruded from his face and had now spread to his whole body and were crawling and biting him. He was commenced on olanzapine 10 mg once a day and pregabalin 75 mg once a day and achieved full remission within 4 days.

Case 2

Mr. B, a 76-year-old farmer, presented with an 8-month history of crawling sensations on the left side of his head and upper face and was convinced this to be insects crawling and biting over his skin. He described the insects as being 1–1.5 inches long and brought samples of skin debris in a box. He repeatedly showed these samples to all his family members and tried consistently to convince that he had captured some of these insects and would become excessively irritable when confronted by anyone.

He also had interrupted sleep at night and used to blame the itching and biting by the insects. Else, he managed his social activities and performed all his activities of daily living independently. Eight months prior to his presentation, he had developed skin eruptions on the left part of his head which subsided within a month.

On admission, general and systemic examination was normal except for the presence of scars on the left side of the scalp. Blood investigations including full blood count, thyroid functions, fasting blood sugar, Vitamin B12, and folate were all within normal limits. Computed tomography head showed age-related atrophy but was otherwise normal. He was initially commenced on a combination of antipsychotic and antidepressant, namely olanzapine and fluoxetine, but showed no response to treatment and this was discontinued. On further detailed history, it became clear that Mr. B had suffered from HZ of the affected side about 2 months prior to the current symptomatology. The description of the distribution of lesions pointed to the involvement of the ophthalmic division of the left trigeminal nerve. A diagnosis of PHN was made, and the patient was commenced on pregabalin 75 mg once daily and amitriptyline 12.5 mg once a day, resulting in full remission of symptoms within 7 days.

DISCUSSION

These two cases highlight the importance of exploring possible organic causes of delusional psychosis, especially in the elderly. Although several cases are reported in literature regarding the various causes of secondary organic DP,[14-16] DP secondary to the HZ infection is more or less unreported in literature. To our knowledge, only one such case of secondary DP following PHN is reported in literature. Harper and Moss in 1992[17] described a case of a 76-year-old woman presented with delusions of infestation with feelings of spider crawling under her skin and butterflies alighting from her back. She suffered from an episode of HZ 18 months prior to presentation and had persistent PHN. She responded to a combination of pimozide and carbamazepine. One of our patients was treated with olanzapine, a second-generation antipsychotic that is frequently used in treating psychotic and delusional disorders.[18] Although the literature suggests that pimozide is the drug of choice in DP, olanzapine was chosen as the treatment of choice over pimozide, due to careful consideration of the side effect prolife of both drugs. Another case was reported by Sales *et al*.[19] describing a case of a 77-year-old woman with peripheral neuropathy presenting with secondary DP treated with gabapentin.

Both of our patients also responded to pregabalin, commonly used to treat neuropathic pain and paresthesia.

In summary, DP is a relatively rare disorder with an increased prevalence in the elderly. The diagnosis must be carefully considered given the possibility of secondary delusional psychosis, and a careful history to evaluate all such factors must be considered along with the possibility of PHN.

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Conflicts of interest
There are no conflicts of interest.

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